

# REPORT ON MACHINERY.

No. 17586

No. in Survey held at *Newcastle & North Shields* Date, first Survey *24<sup>th</sup> Octr 1883* Last Survey *17<sup>th</sup> April 1884*  
 Reg. Book. *on the Screw Steamer Hampshire* Received at London Office *TUESDAY 27 MAY 1884*  
 Master *G. Boniface* Built at *North Shields* By whom built *J. W. Smith & Co* Tons *1636*  
 Engines made at *Newcastle* By whom made *Wigham Richardson & Co* When built *1884*  
 Boilers made at *Do* By whom made *Do* when made *1884*  
 Registered Horse Power *180* Owners *J. Scrutton Sons & Co* when made *1884*  
 Port belonging to *London*

## ENGINES, &c.—

Description of Engines *Inverted Compound Surface Condensing*  
 Diameter of Cylinders *31 & 62* Length of Stroke *42* No. of Rev. per minute *60* Point of Cut off, High Pressure *.5* Low Pressure *.5*  
 Diameter of Screw shaft *11* Diam. of Tunnel shaft *10 1/4* Diam. of Crank shaft journals *11* Diam. of Crank pin *11* size of Crank webs *13 1/4 x 7 1/2*  
 Diameter of screw *14-0* Pitch of screw *19-0* No. of blades *4* state whether moveable *no* total surface *576*  
 No. of Feed pumps *2* diameter of ditto *4* Stroke *24* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *2* diameter of ditto *4* Stroke *24* Can one be overhauled while the other is at work *yes*  
 Where do they pump from *Engine Space 3. A hold 2. H hold 2, Tunnel well 1, All tanks. Sea*  
 No. of Donkey Engines *Two* Size of Pumps *8 x 10 & 4 x 9* Where do they pump from *All Bilges as above*  
*For M. Tank 3, Aft Tank 3 Sea.*  
 Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*  
 No. of bilge injections *1* and sizes *4* Are they connected to condenser, or to circulating pump *Ca*  
 How are the pumps worked *Lever over Condenser*  
 Are all connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Both*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *yes* Are the discharge pipes above or below the deep water line *Line*  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel *yes* Are the blow off cocks fitted with a spigot and brass covering plate *yes*  
 What pipes are carried through the bunkers *e* How are they protected *e*  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times *yes*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *now*  
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Top platform of engine room*

## BOILERS, &c.—

Number of Boilers *Two* Description *Cylindrical* Whether Steel or Iron *Steel*  
 Working Pressure *80* Tested by hydraulic pressure to *160* Date of test *27<sup>th</sup> Decem Dec 1883*  
 Description of superheating apparatus or steam chest *None*  
 Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *e*  
 No. of square feet of fire grate surface in each boiler *524* Description of safety valves *Spring* No. to each boiler *2*  
 Area of each valve *14.2* Are they fitted with easing gear *yes* No. of safety valves to superheater *e* area of each valve *e*  
 Are they fitted with easing gear *e* Smallest distance between boilers and bunkers or woodwork *12* Diameter of boilers *12-6*  
 Length of boilers *10-6* description of riveting of shell long. seams *Shell Lap* circum. seams *Double Lap* Thickness of shell plates *1/16*  
 Diameter of rivet holes *1 1/16* whether punched or drilled *drilled* pitch of rivets *4 1/4* Lap of plating *7"*  
 Per centage of strength of longitudinal joint *75%* working pressure of shell by rules *79 1/2* size of manholes in shell *16 x 12*  
 Size of compensating rings *6 1/2 x 3/4* No. of Furnaces in each boiler *3*  
 Outside diameter *37* length, top *7-0* bottom *7-0* thickness of plates *1/2* description of joint *Butt & Strap* if rings are fitted *half*  
 Greatest length between rings *7-0* working pressure of furnace by the rules *86* combustion chamber plating, thickness, sides *1/2* back *1/2* top *1/2*  
 Pitch of stays to ditto, sides *8 3/8* back *8 3/8* top *8 3/8* If stays are fitted with nuts or riveted heads *Both* working pressure of plating by rules *81.5*  
 Diameter of stays at smallest part *1 1/4* working pressure of ditto by rules *96* end plates in steam space, thickness *3/4*  
 Pitch of stays to ditto *15 3/8 x 14 1/2* how stays are secured *With nuts* working pressure by rules *85* diameter of stays at smallest part *2 1/4*  
 working pressure by rules *103* Front plates at bottom, thickness *9/16* Back plates, thickness *5/8*  
 Greatest pitch of stays *11 1/2* working pressure by rules *80* Diameter of tubes *3 3/4* pitch of tubes *5* thickness of tube plates, front *1/16* back *5/8* how stayed *Lube* pitch of stays *15* width of water spaces *6*  
 Diameter of Superheater or Steam chest *None* length thickness of plates description of longitudinal joint diam. of rivet holes  
 Pitch of rivets working pressure of shell by rules diameter of flue thickness of plates If stiffened with rings  
 Distance between rings working pressure by rules end plates of superheater, or steam chest; thickness how stayed  
 Superheater or steam chest; how connected to boiler



DONKEY BOILER— Description *Vertical & 2 cross tubes*  
Made at *Gatehead* by whom made *Clark Chapman & Co* when made *29-2-84* where fixed *Storehold*  
Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *1613* fire grate area *27 ft* description of safety  
valves *Spring* No. of safety valves *2* area of each *8-3* if fitted with easing gear *yes* if steam from main boilers can  
enter the donkey boiler *no* diameter of donkey boiler *7-0* length *13-6* description of riveting *Double Lap*  
Thickness of shell plates *3/8* diameter of rivet holes *1 1/16* whether punched or drilled *no* pitch of rivets *3 7/8* lap of plating *5 1/16*  
per centage of strength of joint *72 1/2* thickness of crown plates *3/8* stayed by *Diagonal & 8 Stays 1 1/2" diam*  
Diameter of furnace, top *5-8* bottom *5-11 1/4* length of furnace *6-2* thickness of plates *3/8* description of joint *Single Lap*  
Thickness of furnace crown plates *3/8* stayed by *Same as shell crown* working pressure of shell by rules *88*  
Working pressure of furnace by rules *83* diameter of uptake *18* thickness of plates *7/16* thickness of water tubes *5/8*

SPARE GEAR. State the articles supplied:— *5 bars of Stays in fire box*  
*As per List of Society's*  
*requirements, also air & oil pump rods & buckets*  
*complete, 1 valve spindle, half crank shaft.*

The foregoing is a correct description,

*Wigham Richardson & Co* Manufacturer of Main Engines & Engines

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The Machinery of this vessel has been specially*  
*surveyed during construction. The materials and*  
*workmanship are sound and satisfactory and*  
*eligible in my opinion to have the notation*  
*✠ Lloyd's M & C 4-84 in the Society's Register Book.*

*No submitted that this*  
*vessel is eligible to have*  
*the notation + M & C*  
*4-84 recorded.*

The amount of Entry Fee . . . £ 2 : - : - received by me,

Special . . . £ 27 : - : -

Donkey Boiler Fee . . . £ - : - : -

Certificate (if required) . . . £ - : - : -  
To be sent as per margin.

(Travelling Expenses, if any, £ - : - : -)

Committee's Minute

FRIDAY 30 MAY 1884

*W. B. B. B.*  
*Wm. B. B. B.*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

*Newcastle*

Lloyd's Register  
Foundation